

# 150 YEARS OF TIDE TABLES

NOAA and its predecessor agencies have published annual tide tables since the 1860s. These tables are used around the world for safe navigation. In October 2015, NOAA issued its 150th edition of Tide Tables.

**1830**

Tide predictions begin in the United States. The American Almanac publishes one high tide time prediction per day for Boston, New York, and Charleston.

**1844**

Tide Notes, including lunital intervals, appear on nautical charts of U.S. coasts and harbors.

**1853**

The Appendix of the Annual Report of the Superintendent of the U.S. Coast Survey publishes tables for obtaining tide predictions by the lunital interval method for the first time.

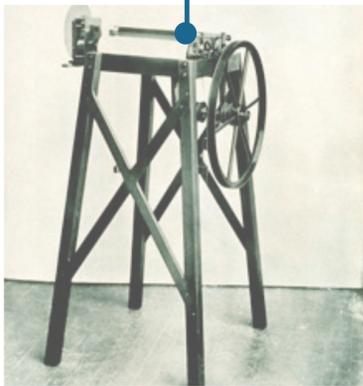
REPORT OF THE SUPERINTENDENT

I.

Locality.	State.	Interval between time of moon's transit (setting) and time of High Water.		Rise and fall.		
		Mean.	Difference between greatest and mean.	Mean.	Spring.	Neap.
Atlantic wharf.....	Mass.	11 25	0 44	8.5	10.0	7.7
Fort Constitution.....	N. H.	11 25	0 53	8.6	9.8	7.2
Custom-house wharf.....	Mass.	11 25	0 50	7.8	9.1	6.6
.....	Mass.	11 15	0 50	9.2	10.6	7.2
.....	Mass.	11 15	0 55	9.5	10.9	8.5
Charlestown dry-dock.....	Mass.	11 22	0 44	10.1	13.1	7.7
Nantucket.....	Mass.	11 55	0 27	1.0	.....	.....
Commercial wharf.....	Mass.	10 24	0 27	3.1	8.6	5.2
Light-house pier.....	Mass.	12 16	.....	2.0	2.5	1.1
.....	Mass.	11 43	0 31	1.7	1.8	1.1
North side.....	Mass.	8 04	0 40	2.4	2.6	2.2
South side.....	Mass.	8 06	.....	3.3	.....	.....
.....	Mass.	8 56	.....	1.5	.....	.....

**1851**

Joseph Saxton invents a self-registering tide gauge, and it is installed by the U.S. Coast Survey in San Francisco by 1854.

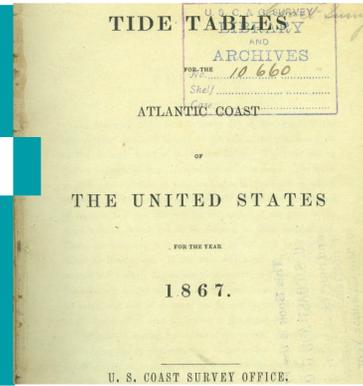


**1865**

U.S. Coast Survey begins work on the 1st edition of Tide Tables.

**1866**

In December, the U.S. Coast Survey publishes the 1st edition of Tide Tables for the year 1867.



**1867**

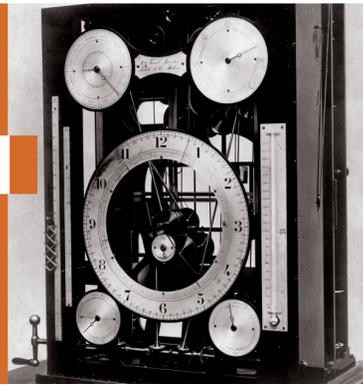
Sir William Thomson (Lord Kelvin) introduces the harmonic method for tide predictions.

**1880**

Tidal current predictions begin for New York Harbor and the vicinity.

**1882**

William Ferrel and Rollin Harris of the U.S. Coast and Geodetic Survey introduce the Maxima and Minima Tide Predictor, which begins making predictions in 1885.



**1887**

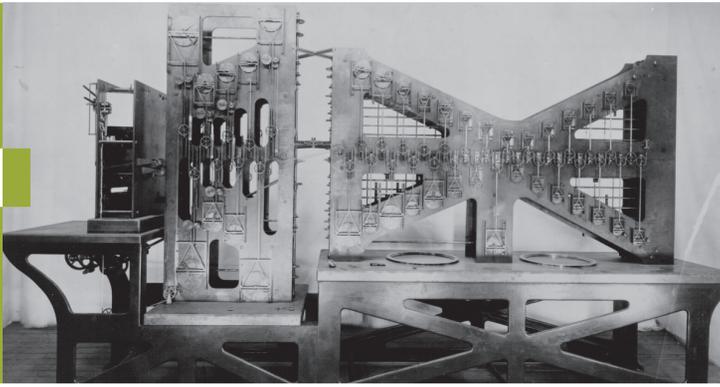
Low tide predictions are included for all stations in the Tide Tables.

**1896**

Tide Tables are extended to include ports throughout the world.

**1912**

Harris-Fischer "Tide Predicting Machine No. 2" replaces Ferrel's Tide Predictor.



**1923**

Tidal Current Tables are first published separately from Tide Tables.

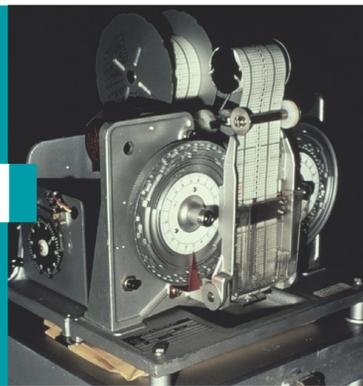
**1940**

Special restricted tide tables for war efforts begin, lasting until 1951. Women had a role in operating tide prediction machines during WWII.



**1965**

Analog-to-digital recorder (ADR) tide gauges and computer processing are introduced.



**1966**

The electronic digital computer is introduced for performing harmonic analyses and computing tide predictions.

**1970**

NOAA forms as an agency and tide prediction tables begin to be published under the NOAA name.

**1996**

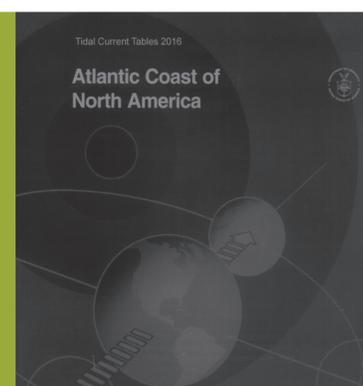
NOAA's National Ocean Service begins providing tide and tidal current predictions exclusively on the Internet and on CDs. Private publishers begin printing NOAA prediction tables for tides and currents.

**2008**

Electronic copies of the published Tide Tables and Tidal Current Tables from past years are made available as PDF documents through NOAA's Tides & Currents website.

**2015**

NOAA celebrates 150th edition of Tide Tables.



This information is based on timelines found in "Understanding TidesE" by Steacy Dopp Hicks.

Hicks, S. D., Szabados, M. W., & Center for Operational Oceanographic Products and Services (U.S.). (2006). Understanding tides. Silver Spring, Md.: U.S. Dept. of Commerce.